

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A brazing flux for brazing, comprising: in particular for brazing metal components,  
a flux, comprising a base material and nanoparticles, in which nanoparticles are added to a base material  
wherein the flux contains nanoparticles in an amount between 0.01% by volume and 10% by volume,  
wherein the nanoparticles comprise at least one kind of nanoparticle selected from the group consisting of nanoscale pigments, nanoaggregates, oxides, oxide hydrates, nitrides, carbides of aluminum, carbides of silicon, carbides of boron, transition metals, carbon nanoparticles, coated nanoparticles, and grafted nanoparticles.
2. (Canceled)
3. (Canceled)
4. (Currently Amended) The flux as claimed in claim 1 [[3]], in which the proportion of organic polymer in the mixture after drying is between approximately 0.01% by volume and 10% by volume, in particular between 0.1% by volume and 1% by volume.
5. (Currently Amended) The flux as claimed in claim 1 [[3]], in which the polymer used is polyurethanes, synthetic resins, phthalates, acrylates, vinyl resins, silicone resins and/or polyolefins.
6. (Previously Presented) The flux as claimed in claim 1, in which the base material used is potassium fluoroaluminates with the empirical formula  $K_{1-3}AlF_{4-6}$  or potassium and/or cesium fluorostannates with the empirical formulae  $KSnF_3$  and  $CsSnF_3$ .
7. (Withdrawn) A process for producing the flux as claimed in claim 1, in which nanoparticles are produced by dispersion methods or ultrafine wet milling and are added to a base material prior to the brazing process.

8. (Withdrawn) A process for producing the flux as claimed in claim 1, in which nanoparticles are firstly dispersed in an organic polymer and then added as a nanopaint to a base material prior to the brazing process.
9. (Withdrawn) A process for brazing metal components, in which the flux as claimed in claim 1 is used.
10. (Withdrawn) A process for brazing metal components, in which starting materials for nanoparticles are added to a base material prior to the brazing process and nanoparticles which are formed by a chemical reaction during the brazing process are deposited on the component surface.
11. (Withdrawn) The process as claimed in claim 10, in which the reaction takes place at a temperature in a range between 350°C and 660°C, in particular between 350°C and 600°C, and in a nitrogen atmosphere.
12. (Withdrawn) The process as claimed in claim 10, in which the starting materials for nanoparticles used are carbon and/or oxides, oxide hydrates, nitrides and/or carbides of aluminum, silicon, boron and/or transition metals, preferably from transition groups IV and V of the periodic system, and/or cerium.
13. (Withdrawn) The process as claimed in claim 10, in which the base material used is potassium fluoroaluminates with the empirical formula  $K_{1-3}AlF_{4-6}$  or potassium and/or cesium fluorostannates with the empirical formulae  $KSnF_3$  and  $CsSnF_3$ .
14. (Withdrawn) The use of the flux as claimed in claim 1 for producing nanocoated components, in particular heat exchangers, based on aluminum or aluminum alloys for the automotive industry.
15. (New) The flux as claimed in claim 1, wherein the flux contains nanoparticles in an amount between 0.1% by volume and 1% by volume.
16. (New) The flux as claimed in claim 1, wherein the transition metals are transition metals of groups IV and V of the periodic system.

17. (New) The flux as claimed in claim 1, wherein the kind of nanoparticle is a nanoscale pigment.
18. (New) The flux as claimed in claim 1, wherein the kind of nanoparticle is a nanoaggregate.
19. (New) The flux as claimed in claim 1, wherein the kind of nanoparticle is an oxide.
20. (New) The flux as claimed in claim 1, wherein the kind of nanoparticle is a nitride.
21. (New) The flux as claimed in claim 1, wherein the kind of nanoparticle is a carbide of aluminum, silicon, or boron.
22. (New) The flux as claimed in claim 1, wherein the kind of nanoparticle is a transition metal.
23. (New) The flux as claimed in claim 22, wherein the transition metal is cerium.
24. (New) The flux as claimed in claim 1, wherein the kind of nanoparticle is a carbon nanoparticle.
25. (New) The flux as claimed in claim 1, wherein the kind of nanoparticle is a coated nanoparticle.
26. (New) The flux as claimed in claim 1, wherein the kind of nanoparticle is a grafted nanoparticle.
27. (New) The flux as claimed in claim 1, wherein the nanoparticles improve a resistance to corrosion of a metal component brazed with the flux, as compared to a flux without the nanoparticles.
28. (New) The flux as claimed in claim 1, wherein the nanoparticles improve an adhesion of paint of a metal component brazed with the flux, as compared to a flux without the nanoparticles.

29. (New) The flux as claimed in claim 1, wherein the nanoparticles reduce an odor of the flux, as compared to a flux without the nanoparticles.

30. (New) The flux as claimed in claim 1, wherein the nanoparticles improve a thermal conductivity of the flux, as compared to a flux without the nanoparticles.

31. (New) The flux as claimed in claim 1, wherein the nanoparticles improve a water runoff property of a metal component brazed with the flux, as compared to a flux without the nanoparticles.

32. (New) The flux as claimed in claim 31, wherein the water runoff property provides a self-cleaning effect for the metal component.

33. (New) The flux as claimed in claim 32, wherein the water runoff property further provides a faster drying effect for the metal component.

34. (New) The flux as claimed in claim 33, wherein the self-cleaning effect and the faster drying effect minimize the growth of microorganisms on the metal component.

35. (New) The flux as claimed in claim 1, wherein the nanoparticles have a diameter of a few nanometers.

36. (New) The flux as claimed in claim 1, wherein the nanoparticles have a diameter of 40 to 100 nm.

37. (New) The flux as claimed in claim 1, wherein the nanoparticles comprise switchable surfaces.

38. (New). The flux as claimed in claim 37, wherein the switchable surfaces are alternatively switchable between hydrophobic surfaces and hydrophilic surfaces.